IN THE CLAIMS

The following listing of the claims is provided in accordance with 37 C.F.R. §1.121:

1. (original) A device comprising a mechanical structure micromachined in or on a substrate, said mechanical structure comprising a compliant support structure, and a member supported by said compliant support structure, wherein said compliant support structure changes size or shape during movement of said member.

2. (original) The device as recited in claim 1, wherein said member comprises a membrane and a first electrode supported by said membrane, and further comprising a second electrode disposed at a distance from said first electrode to form a capacitor with a cavity disposed therebetween, wherein said compliant support structure changes size or shape during compression/expansion of said membrane.

3. (original) The device as recited in claim 2, further comprising a pedestal, said second electrode being supported by said pedestal.

4. (original) The device as recited in claim 2, wherein said compliant support structure comprises a first wall, a ring-like structure having an inner peripheral portion and an outer peripheral portion, one of said inner and outer peripheral portions being built on said first wall, and a second wall built on the other of said inner and outer peripheral portions and connected to said membrane.

5. (original) The device as recited in claim 4, further comprising a third electrode formed on a surface of said ring-like structure.

6. (original) The device as recited in claim 5, further comprising a fourth electrode formed on a surface of said membrane and forming a capacitor with said third electrode.

7. (original) The device as recited in claim 5, further comprising a fourth electrode formed on a surface of said substrate and forming a capacitor with said third electrode.

8. (original) The device as recited in claim 2, wherein said compliant support structure in cross section resembles a cantilevered beam

9. (original) The device as recited in claim 2, wherein said compliant support structure comprises:

a first wall;

a first ring-like structure having an inner peripheral portion and an outer peripheral portion, one of said inner and outer peripheral portions of said first ring-like structure being built on said first wall;

a second wall built on the other of said inner and outer peripheral portions of said first ring-like structure;

a second ring-like structure overlying said first ring-like structure and having an inner peripheral portion and an outer peripheral portion, one of said inner and outer peripheral portions of said second ring-like structure being built on said second wall; and

a third wall built on the other of said inner and outer peripheral portions of said second ring-like structure and connected to said membrane.

10. (original) The device as recited in claim 9, further comprising a third electrode formed on a surface of one of said first and second ring-like structures.

11. (original) The device as recited in claim 2, wherein said compliant support structure in cross section resembles a double cantilevered beam.

12. (original) The device as recited in claim 2, wherein the compliance of said compliant support structure and the stiffness of said membrane are selected so that said membrane vibrates in a piston-like manner.

13. - 29. (canceled)

30. (original) A cMUT cell comprising a substrate, a plurality of compliant support structures, a membrane supported over a cavity by said compliant support structures, a first electrode supported by said membrane, and a second electrode that forms a capacitor with said first electrode, said cavity being disposed between said first and second electrodes, wherein each of said compliant support structures change size or shape during compression/expansion of said membrane.

31. (original) The cMUT cell as recited in claim 30, wherein said shape is a cantilever beam.

32. (original) The cMUT cell as recited in claim 30, wherein said shape is an arch.

33. (original) The cMUT cell as recited in claim 30, wherein said shape is a coil

34. - 35. (canceled)